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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,042	01/09/2004	Mou-Shiung Lin	MEGP0004USA1	8665
27765	7590	12/10/2008		
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION				
P.O. BOX 506				
MERRIFIELD, VA 22116				
EXAMINER				
JACKSON JR, JEROME				
ART UNIT		PAPER NUMBER		
2815				
NOTIFICATION DATE		DELIVERY MODE		
12/10/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com

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### Office Action Summary

**Application No.**

10/755,042

**Applicant(s)**

LIN ET AL.

**Examiner**

Jerome Jackson Jr.

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 163-208 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 163-208 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 163-208 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As stated previously, the term "polymer" is broader than the disclosed more narrower range of interlevel dielectric layers, disclosed specifically as "polyimide, benzocyclobutene, porous dielectric material and stress buffer material". There is no support for broadening the "dielectric layer" disclosure to include "polymer". The disclosed "filling layer" is specifically stated to be "epoxy" or "polymer", however, the filling layer is not the "dielectric" layer and there is no support for equating the "filling" layer with the "dielectric" layer. Claim 163 and other independent claims recite multiple polymer layers and there is no support for multiple polymer layers. There can be multiple "dielectric" layers but not multiple polymer (= "filling") layers. All claims are considered new matter.

Claims 163-208 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger with Wagner and Wachtler, of record.

The previous rejection still applies. The new limitations are not patentable as Eichelberger discloses multiple layers of metallizations on polymer dielectrics and directly over dies wherein the metalizations inherently comprise resistance,

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capacitance and inductance, hence are "passive devices". Further, Eichelberger discloses a die between planar portions of polymer layer dielectric 104. See figure 2.

Claims 163-208 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger with Wagner and Wachtler and further in view of Cole, of record.

The previous rejection still applies.

Applicant's arguments filed 9/11/08 have been fully considered but they are not persuasive. Applicant argues PI and BCB are polymers and therefore polymer is not new matter. This argument is not convincing because PI and BCB are specific compounds and applicant has not disclosed "polymer" in general or generically for the dielectric layers. There is no original language specifically stating the dielectric layers are "polymer". The generic term "polymer" is clearly much broader or of different scope than the specifically disclosed "dielectric" layers and specifically "PI, BCB, porous dielectric layer, and stress buffer material" for the dielectric layers. "Polymer" is new matter here and does not have original basis.

In regard to "electroplated copper" applicant argues limitations not in the claims, specifically "grain size", "crystal orientation" and "seed layer", and therefore the arguments are not convincing of patentability. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding metal layers over two portions of a polymer layer and over a die and including a passive element, see figure 2 of Eichelberger with multiple layers of polymer dielectric 104/106, die 102, metallizations 108/114, and solder bump 110 all disposed over the die. See also Wagner and Wachtler disclosing similar structure as stated in the rejections. The metalizations comprise capacitance, resistance and inductance inherently. There are no specific "passive devices" claimed structurally distinguishing over the metallization "passive devices" of the applied art.

In regard to "test or trying" in the combination rejection, see the recited caselaw on combination of references. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In addition, the prior art discloses multiple polymer dielectric layers. See Eichelberger, as stated above. There is no "trying" here, multiple polymer layers of dielectric are known from a single reference or suggested from the totality of the applied references.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 571-272-1730. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerome Jackson Jr./  
Primary Examiner, Art Unit 2815